AMENDMENTS TO THE CLAIMS

1-15. (Canceled)

16. (New) A capillary array electrophoresis apparatus comprising:

a capillary array constituted by a plurality of capillaries for containing electrophoresis medium for separating specimen, said capillary array including a detection portion formed by at least parts of the plurality of capillaries, said parts being aligned substantially parallel;

a power source adapted to apply a voltage between respective ends of the capillaries; and

an irradiation and detection system including a laser oscillator which irradiates no less than one laser beam across the detection portion and detects light emitted from the specimen,

wherein the laser beam is incident on an outermost end capillary in the detection portion in an inclined manner so that an optical path of the incident laser beam into the end capillary differs from an optical path of a laser beam reflected from the detection portion.

17. (New) A capillary array electrophoresis apparatus according to claim 16, wherein the capillary is a glass tube covered with a coating and at least the coating on the capillary in the detection portion is removed.

18. (New) A capillary array electrophoresis apparatus according to claim 16, wherein an optical axis of the laser beam incident on the end capillary is inclined with respect to a line that is perpendicular to a center axis of the end capillary on a plane formed by center axes of the capillaries in the detection portion.

19. (New) A capillary array electrophoresis apparatus according to claim 18, wherein an optical axis of the laser beam incident on the end capillary is inclined by

about 2° with respect to a line that is perpendicular to a center axis of the end capillary on a plane formed by center axes of the capillaries in the detection portion.

20. (New) A capillary array electrophoresis apparatus according to claim 16, wherein the irradiation and detection system includes a laser beam preventing member having a hole for passing a laser beam irradiated into the detection portion and for interrupting a laser beam reflected from the detection portion.

21. (New) A capillary array electrophoresis apparatus according to claim 16, wherein the irradiation and detection system includes a lens which converges a laser beam parallel with a line that is perpendicular to a center axis of the end capillary on a plane formed by center axes of the capillaries in the detection portion, and upon displacement, said lens is capable of inclining the laser beam with respect to the perpendicular line.

22. (New) A capillary array electrophoresis apparatus according to claim 16, wherein the irradiation and detection system includes a wavelength dispersion mechanism which disperses a wavelength of light radiated from the detection portion in a direction that is substantially perpendicular to an optical axis of the laser beam crossing the detection portion.

23. (New) A capillary array electrophoresis apparatus according to claim 16, wherein the wavelength dispersion mechanism includes at least a grating or a prism.

24. (New) A capillary array electrophoresis apparatus according to claim 16, wherein the irradiation and detection system includes a two dimensional CCD for detecting a light radiated from the detection portion and having a grid of pixels configured substantially parallel with an optical axis of the laser beam crossing the detection portion.

25. (New) A capillary array electrophoresis apparatus comprising:

a capillary array constituted by a plurality of capillaries for containing electrophoresis medium for separating specimen, said capillary array including a detection portion formed by at least parts of the capillaries, said parts being aligned substantially parallel;

a power source adapted to apply a voltage between respective ends of the capillaries; and

an irradiation and detection system including a laser oscillator which irradiates no less than one laser beam across the detection portion and detects light emitted from the specimen,

wherein an optical axis of the laser beam incident on an outermost end capillary is inclined with respect to a line that is perpendicular to a center axis of the end capillary on a plane formed by center axes of the capillaries in the detection portion.

26. (New) A capillary array electrophoresis apparatus according to claim 25, wherein each capillary is a glass tube covered with a coating and at least the coating on the capillary in the detection portion is removed.

27. (New) A capillary array electrophoresis apparatus according to claim 25, wherein an optical axis of the laser beam incident on the end capillary is inclined by about 2° with respect to a line that is perpendicular to a center axis of the end capillary on a plane formed by center axes of the capillaries in the detection portion.

28. (New) A capillary array electrophoresis apparatus according to claim 25, wherein the irradiation and detection system includes a laser beam preventing member having a hole for passing a laser beam irradiated into the detection portion and for interrupting a laser beam reflected from the detection portion.

29. (New) A capillary array electrophoresis apparatus according to claim 25, wherein the irradiation and detection system includes a lens which converges a laser beam parallel with a line that is perpendicular to a center axis of the end capillary on a

plane formed by center axes of the capillaries in the detection portion, and upon displacement, said lens is capable of inclining the laser beam with respect to the perpendicular line.

30. (New) A capillary array electrophoresis apparatus according to claim 25, wherein the irradiation and detection system includes a wavelength dispersion mechanism for dispersing a wavelength of light generated from the specimen in a direction that is substantially perpendicular to an optical axis of the laser beam crossing the detection portion.

31. (New) A capillary array electrophoresis apparatus according to claim 30, wherein the wavelength dispersion mechanism includes at least a grating or a prism.

32. (New) A capillary array electrophoresis apparatus according to claim 25, wherein the irradiation and detection system includes a two dimensional CCD for detecting a light radiated from the detection portion and having a grid of pixels that are almost parallel with an optical axis of the laser beam crossing the detection portion.

33. (New) A capillary array electrophoresis apparatus comprising:

a capillary array constituted by a plurality of capillaries for containing electrophoresis medium for separating specimen, said capillary array including a detection portion formed by at least parts of the capillaries, said parts being aligned substantially parallel;

a power source adapted to apply a voltage between respective ends of the capillaries; and

an irradiation and detection system including a laser oscillator for irradiating laser beams across the detection portion respectively from both sides of the detection portion and for detecting light emitted from the specimen,

wherein the laser beams are incident on outermost end capillaries at both sides in the detection portion in an inclined manner so that an optical path of the incident laser

beam into each end capillary differs from an optical path of a laser beam reflected from the detection portion.

34. (New) A capillary array electrophoresis apparatus according to claim 33, wherein each capillary is a glass tube covered with a coating and at least the coating on the capillary in the detection portion is removed.

35. (New) A capillary array electrophoresis apparatus according to claim 33, wherein an optical axis of the laser beam incident on the end capillary is inclined with respect to a line that is perpendicular to a center axis of the end capillary on a plane formed by center axes of the capillaries in the detection portion.

36. (New) A capillary array electrophoresis apparatus according to claim 33, wherein the irradiation and detection system includes a laser beam preventing member having a hole, said preventing member for passing a laser beam irradiated into the detection portion and for interrupting at least one of a laser beam reflected from the detection portion and a laser beam having crossed the detection portion.

37. (New) A capillary array electrophoresis apparatus according to claim 33, wherein the irradiation and detection system includes a lens for converging a laser beam parallel with a line that is perpendicular to a center axis of the end capillary on a plane formed by center axes of the capillaries in the detection portion, and upon displacement, said lens is capable of inclining the laser beam with respect to the perpendicular line.

38. (New) A capillary array electrophoresis apparatus according to claim 33, wherein the irradiation and detection system includes a wavelength dispersion mechanism for eliminating an image distortion at a light generation point in the detection portion.

39. (New) A capillary array electrophoresis apparatus according to claim 38, wherein the wavelength dispersion mechanism includes at least a grating or a prism.

40 (New) A capillary array electrophoresis apparatus according to claim 33, wherein the irradiation and detection system includes a two dimensional CCD for detecting a light radiated from the detection portion and having a grid of pixels, said grid being almost parallel to an optical axis of the laser beam crossing the detection portion.

41. (New) A capillary array electrophoresis apparatus according to claim 33, wherein optical axes of the laser beams incident on the detection portion are inclined with respect to a plane formed by center axes of the capillaries in the detection portion.

42. (New) A capillary array electrophoresis apparatus according to claim 33, wherein optical axes of the laser beams incident on the detection portion are inclined by about 2° with respect to a plane formed by center axes of the capillaries in the detection portion.

43. (New) A capillary array electrophoresis apparatus according to claim 33, wherein the laser beams crossing the detection portion are not in parallel so that the laser beams having crossed the detection portion are prevented from reaching the laser oscillator.

44. (New) A capillary array electrophoresis apparatus according to claim 33, wherein respective inclinations, of optical axes of the laser beams incident on the detection portion, with respect to a line that is perpendicular to a center axis of the end capillary on a plane formed by center axes of the capillaries in the detection portion, differ so that the laser beams having crossed the detection portion are prevented from reaching the laser oscillator.

45. (New) A capillary array electrophoresis apparatus according to claim 33, wherein laser beams crossing the detection portion intersect near a center of the detection portion.

46. (New) A capillary array electrophoresis apparatus according to claim 33, wherein the irradiation and detection system includes a grating for optically separating light radiated from the detection portion.

47. (New) A capillary array electrophoresis apparatus comprising:

a capillary array constituted by a plurality of capillaries for containing electrophoresis medium for separating specimen, said capillary array including a detection portion formed by at least parts of the capillaries, said parts being aligned substantially parallel;

a power source adapted to apply a voltage between respective ends of the capillaries; and

an irradiation and detection system including a laser oscillator which irradiates laser beams across the detection portion respectively from both sides of the detection portion and detects light emitted from the specimen,

wherein optical axes of the laser beams incident on outermost end capillaries are inclined with respect to a line that is perpendicular to a center axis of the end capillaries on a plane formed by center axes of the capillaries in the detection portion.

48. (New) A capillary array electrophoresis apparatus according to claim 47, wherein each capillary is a glass tube covered with a coating and at least the coating on the capillary in the detection portion is removed.

49. (New) A capillary array electrophoresis apparatus according to claim 47, wherein the irradiation and detection system includes a laser beam preventing member having a hole, said preventing member for passing a laser beam irradiated into the detection portion and for interrupting at least one of a laser beam reflected from the detection portion and a laser beam having crossed the detection portion.

50. (New) A capillary array electrophoresis apparatus according to claim 47, wherein the irradiation and detection system includes a lens for converging a laser beam parallel with a line that is perpendicular to a center axis of the end capillary on a plane formed by center axes of the capillaries in the detection portion, and upon

displacement, said lens is capable of inclining the laser beam with respect to the perpendicular line.

51. (New) A capillary array electrophoresis apparatus according to claim 47, wherein the irradiation and detection system includes a wavelength dispersion mechanism for eliminating an image distortion at a light generation point in the detection portion.

52. (New) A capillary array electrophoresis apparatus according to claim 51, wherein the wavelength dispersion mechanism includes at least a grating or a prism.

53. (New) A capillary array electrophoresis apparatus according to claim 47, wherein the irradiation and detection system includes a two dimensional CCD for detecting a light generated from a specimen containing fluorescent pigment, said CCD having a grid of pixels being almost parallel with an optical axis of the laser beam crossing the detection portion.

54. (New) A capillary array electrophoresis apparatus according to claim 47, wherein optical axes of the laser beams incident on the end capillaries are inclined with respect to a plane formed by center axes of the capillaries in the detection portion.

55. (New) A capillary array electrophoresis apparatus according to claim 47, wherein optical axes of the laser beams incident on the end capillaries are inclined by about 2° with respect to a plane formed by center axes of the capillaries in the detection portion.

56. (New) A capillary array electrophoresis apparatus according to claim 47, wherein the laser beams crossing the detection portion are not in parallel so that the laser beams having crossed the detection portion are prevented from reaching the laser oscillator.

57. (New) A capillary array electrophoresis apparatus according to claim 47, wherein respective inclinations, of optical axes of the laser beams incident on the

detection portion, with respect to a line that is perpendicular to a center axis of the end capillary on a plane formed by center axes of the capillaries in the detection portion, differ so that the laser beams having crossed the detection portion are prevented from reaching the laser oscillator.

58. (New) A capillary array electrophoresis apparatus according to claim 47, wherein laser beams crossing the detection portion intersect near a center of the detection potion.

59. (New) A capillary array electrophoresis apparatus according to claim 47, wherein the irradiation and detection system includes a grating for optically separating light radiated from the detection portion.